

APPLICANT(S): STELLACCI, Francesco
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REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

Status of Claims

Claims 1-2, 40, 49-50, 52, 57-58, 97, 106-107, 109 are pending in the application. Claims 1-2, 40, 49-50, 52, 57-58, 97, 106-107, 109 have been rejected. Claims 40, 49, 97 and 106 have been amended. The amendments to claims 40, 49, 97 and 106 are editorial in nature.

Applicants respectfully assert that the amendments to the claims add no new matter.

CLAIM REJECTIONS

35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 1-2, 49-50, 52, 57-58, 106-107, 109 under 35 U.S.C. § 102(b), as being anticipated by Guire et al. [US 6,514,768]. Applicants respectfully traverse this rejection in view of the remarks that follow.

Claim 1 of the present invention recites, "A method of forming a complement image of a master, comprising the steps of:

- a) providing a master that comprises a first set of molecules bound to a first substrate to form a pattern;
- b) assembling via attractive forces or bond formation a second set of

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molecules on the first set of molecules, wherein each molecule in the second set of molecules comprises:

- i) a reactive functional group; and
 - ii) a recognition component that is attracted to or binds to one or more of the first set of molecules;
- c) contacting the reactive functional group of the second set of molecules with a surface of a second substrate, thereby forming a bond between the second set of molecules and the second substrate;
- d) breaking the attractive force or bonds between the first set of molecules and the second set of molecules, thereby forming a complement image of the master; and
- e) optionally repeating steps b) through d) one or more times."

Guire et al. doesn't disclose, teach or suggest the claim because Guire requires " a plurality of multi-ligand conjugates comprising a core having attached thereto:...(ii) at least one molecule of a second ligand binding domain, comprising a nucleic acid sequence selected to bind in a complementary manner with a specific target nucleic acid sequence that may be present in the biological sample, and (iii) at least one molecule of a third ligand, the third ligand comprising a binding ligand configured to bind the multi-ligand conjugate to a binding partner, and c) an assay array support comprising a support surface and a plurality of binding partners selected to bind the third ligand for attachment of the multi-ligand conjugates to the assay array support to form the assay array." (Guire's claim 1, column 23, line 60 through column 24, line 11, underline added for emphasis).

Guire et al. does not teach claim 1 of the present invention because claim 1 does not disclose, and the Examiner does not suggest that claim 1 discloses "a second ligand binding domain, comprising a nucleic acid sequence selected to bind in a complementary manner with a specific target nucleic acid sequence that may be present in the biological sample".

The subject matter of the present invention is directed to printing. It comprises an elegant two-component molecule that can be transferred from one surface to another. The two

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components of the molecule are: (i) the recognition site that may bind to a first substrate; and (ii) the reactive functional group that may bind to a second substrate.

In contrast, Guire's multi-ligand conjugates is a highly complex molecule designed to bind a specific target nucleic acid sequence from solution, and therefore it comprises an additional ligand binding domain which is selected to bind with a specific target nucleic acid sequence. Therefore, Guire does not anticipate the subject matter of the present invention.

Further, Guire et al. does not teach claim 1 of the present invention because claim 1 does not disclose, and the Examiner does not suggest that claim 1 discloses "a molecule of a third ligand,... comprising a binding ligand configured to bind the multi-ligand conjugate to a binding partner, and c) an assay array support comprising a support surface and a plurality of binding partners selected to bind the third ligand to the assay array support."

The subject matter of the present invention comprises novel reactive functional groups, designed to be bonded to a second substrate upon contact (page 13, claim 1, page 7, paragraph 0073).

In contrast, Guire's attachment of the multi-ligand conjugates to the second support surface is not spontaneous and comprises an additional binding partner that functions as a mediator between the third ligand and the assay array support (column 15, lines 13-30; and column 24, claim 9). Guire's attachment to the second support further comprises an induced chemical reaction between the third ligand and the assay array support, or between neighboring third ligand molecules (see for example column 24, claims 11, 12; column 16, line 16-36; Column 16, lines 57-67; and Column 17, lines 6-28).

Therefore, Guire does not anticipate the present invention.

Accordingly, applicants request withdrawal of the rejection to claim 1.

Claims 2, 49-50, 52, are dependent from claim 1. Claim 57 and claims 58, 106-107 and 109 dependent thereon, comprise the limitations of claim 1. Accordingly, applicants request withdrawal of the rejection to claims 2, 49-50, 52, 57-58, 106-107 and 109.

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35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 40 and 97 under 35 U.S.C. § 103(a), as being unpatentable over Guire et al. [US 6,514,768] in view of Aksay et al. [US2001/0023024].

Applicants disagree. Guire does not teach or suggest a nano-contact printing method using a simple two-component molecule and an unmodified printing substrate. Aksay does not describe such nano-contact printing method as well. Thus, each of the references, alone or in combination, do not teach or suggest the method described in the subject claims. Applicants therefore request withdrawal of the rejection.

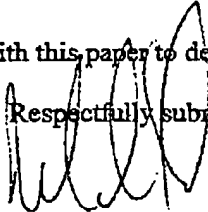
Applicants note that none of the amendments to the claims herein are in response to the above discussed prior art rejections.

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,


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